

### **REMARKS/ARGUMENTS**

This Amendment is being filed in response to the Final Office Action dated February 4, 2010. Reconsideration and allowance of the application in view of the amendment made above and the remarks to follow are respectfully requested.

Claims 1-3, 5-14 and 16-19 are pending in the Application.

The Final Office Action indicates on page 9 that although WO 9300204 was considered by a previous examiner, a copy of the reference could not be found in the file. The Applicants are including a copy of the reference following this amendment for the Examiner's consideration and convenience.

In the Final Office Action, claims 1-3, 5-14 and 16-19 are rejected under 35 U.S.C. §112, second paragraph. This rejection of claims 1-3, 5-14 and 16-19 is respectfully traversed although the suggestions provided by the Examiner for overcoming the rejections are greatly appreciated. In the interest of advancing consideration and allowance of the claims, the claims are amended, without prejudice herein, as suggested by the Examiner. The amendment to the claims is not intended to narrow the scope of the prior claims and is merely submitted to further prosecution of this matter and to either promote allowance of the claims or at least, reduce pending issues and place the claims into a better condition for appeal. Accordingly, consideration and entrance of the amendment to the claims is respectfully requested. It is respectfully submitted that claims 1-3, 5-14 and 16-19 are in proper form and it is respectfully requested that this rejection under 35 U.S.C. §112, second paragraph, be withdrawn.

In the Final Office Action, claims 1-3, 6, 7, 9-11 and 19 are rejected under 35 U.S.C.

§103(a) over U.S. Patent No. 3,836,537 to Sastri ("Sastri") in view of U.S. Patent No. 5,776,615 to Wong ("Wong") and U.S. Patent No. 5,360,239 to Klementich ("Klementich"). Claim 5 is rejected under 35 U.S.C. §103(a) over Sastri in view of Wong and Klementich in further view of U.S. Patent No. 3,838,512 to Sanderson ("Sanderson"). Claims 8, 12-14, 17 and 18 are rejected under 35 U.S.C. §103(a) over Sastri in view of Wong and Klementich in further view of U.S. Patent No. 5,142,785 to Grewal ("Grewal"). Claim 16 is rejected under 35 U.S.C. §103(a) over Sastri in view of Wong and Klementich in further view of Grewal in further view of Sanderson. These rejections are respectfully traversed. It is respectfully submitted that claims 1-3, 5-14 and 16-19 are allowable over Sastri in view of Wong and Klementich alone and in view of any combination of Sanderson and Grewal for at least the following reasons.

It is Applicants belief that this Final Office Action is improper and should be withdrawn and be replaced with a Notice of Allowance or a new, non-final Office. It should be noted that the above §103(a) rejection is similar as previously stated in August 7, 2009 Office Action with the exception of the newly cited Klementich reference. Yet, the arguments stated by the Applicants in a November 9, 2009 Amendment were not addressed other than to say that they were considered but are moot in view of the new grounds of rejection (see, page 9, numbered paragraph 8 of the present Final Office Action). The Applicants respectfully submit that those arguments are not moot since Sastri and Wong are utilized in the Final Office Action for exactly the same purposes as previously utilized with the exception that a new reference has been added.

However, the Final Office Action never addressed the argument previously stated, that "a coating or a layer is not ion implanted into a lower layer, such as a substrate, as recited in the claims. Coatings or layers as described by Sastri are deposited onto a lower layer and typically are adhered, however, it is respectfully submitted that this has no bearing on the claims as presented" in the claims. (See, November 9, 2009 Amendment, pages 10-12.) Yet as is clear, the Final Office Action still maintains that Sastri shows such an implanted layer since the Final Office Action still maintains that "that the word 'implant' merely means to fix firmly to (see dictionary.com)." (See, Final Office Action, page 3.) Further, the Final Office Action maintains that "Sastri does disclose the coating comprising an implanted layer of Cr that is implanted into the metal substrate." (See, Final Office Action, bottom of page 3.)

MPEP §707.07 states under ¶ 7.38, when utilizing "Arguments Are Moot ..." the "Examiner must, however, address any arguments presented by the applicant which are still relevant to any references being applied." Yet, as stated above, Applicants' arguments were not addressed. Clearly, since the references, other than newly cited Klementich, are being utilized for the same reason as previously utilized, Applicants' arguments cannot be said to be moot and therefore should have been addressed in the Final Office Action.

Further, arguments with regard to dependent claims, such as dependent claims 5 and 16 presented on pages 13-15 of the November 9, 2009 Amendment where similarly never addressed in the Final Office Action although Sanderson is presented in the Final Office Action with regard to claims 5 and 16 for the same reason as previously cited in the August 7, 2009 Office Action.

Accordingly, it is respectfully submitted that the Final Office Action is improper and either a Notice of Allowance should be issued or a new Office Action should be issued that addresses those arguments, resetting the time for Applicants response.

The Final Office Action cites Klementich for showing that ion implantation is known (see, Final Office Action, page 6) and then goes on to cite a webpage provided by the Applicants to support the notion that ion implantation is known.

It must be pointed out that the webpage provided by the Applicants is not prior art to the present application as the date of the webpage is November 6, 2009. The Applicants merely provided this webpage in support of the position that the term "ion implantation" is a term of art that is understood by a person of ordinary skill in the art to be completely different than the layer deposition shown by Sastri. The Applicants provided this webpage merely to rebut the citation to dictionary.com that was provided in the Office Action and that is maintained cited in the Final Office Action, which is not a definition that would be recognized by a person of ordinary skill in the art to relate to ion implantation.

Klementich is newly cited in the Final Office Action, although, it is respectfully submitted that Klementich has little if anything to do with the presently pending claims. Klementich shows "[t]hreaded tubular interference fit interconnections and related production techniques are disclosed that are for example useful with large diameter tubular members, including pipe bodies, that can for example function as casing for oil, gas, geothermal, disposal and other wells." (See, Klementich, abstract.)

Klementich in the section cited in the Final Office Action shows "the female thread has in or on its surfaces one or more materials in solid form for enhancing the galling

resistance of those surfaces." (See, Klementich, col. 32, lines 48-50.) Klementich further states that (emphasis added) "metals may be implanted in the thread surfaces, and the metals for enhancing galling resistance may therefore include an implant comprising silicon in the thread surfaces, such as may be deposited through application of Klaysol (tm) to the thread surfaces, or an ion implant using chromium ..." (See, Klementich, col. 32, lines 62-68.) So, while Klementich does show use of chromium implantation on threaded surfaces to increase galling resistance (friction) between the thread surfaces, it is respectfully submitted that this has little or anything to do with the claims as presented.

Accordingly, there is no support from any of the cited references including Sastri and Klementich for the notion espoused in the Final Office Action that "it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided Sastri with ion implanting the first layer of Cr to the blade, as taught by Klementich, because the substitution of one known element for another would have yielded predictable results and all claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective function and the combination would have yielded predictable results." (See, Final Office Action, page 6.)

It is respectfully submitted that there is no teaching from Klementich which may be substituted into Sastri to arrive at the presently claimed subject matter. Klementich merely shows ion implantation onto an outside surface of a thread to increase resistance (galling resistance) between the thread surfaces. How can it be said that this leads to predictable results when it is applied to an interior layer of a cutting member as suggested by the Final

Office Action.

Sastri merely shows layer deposition and not ion implantation. How can the Final Office Action say it is a mere substitution of a known element of Sastri (layer deposition) for another of Klementich (ion implantation on an outside thread surface) which leads to predictable results of an interior layer of a cutting member? It is respectfully submitted that this conclusion finds no support in any of the cited references.

It is respectfully submitted that the cutting member of claim 1 is not anticipated or made obvious by the teachings of Sastri in view of Wong and Klementich. For example, Sastri in view of Wong and Klementich does not teach, disclose or suggest, a cutting member that amongst other patentable elements, comprises (illustrative emphasis added) "a metal substrate which is provided with a cutting edge, at least a portion of the substrate including the cutting edge being provided with a coating comprising carbon, wherein the coating comprises a plurality of stacked pairs of layers, each pair comprising a first layer mainly comprising carbon and a second layer mainly comprising a metal, and each pair having a thickness between 1 and 10 nm, wherein the coating comprises a layer of Cr with Cr<sup>+</sup> ions and the Cr<sup>+</sup> ions are ion implanted into the metal substrate" as recited in claim 1 and as substantially recited in claims 8 and 19.

In Sastri, it is clear that the Cr is deposited as a discrete coating or layer and therefore, has nothing to do with ion implantation. Klementich merely shows ion implantation on an outside surface of thread surfaces to increase surface resistance between the thread surfaces so has nothing to do with the claims as presented.

Wong is cited for showing multiple layers and Sanderson and Grewal are introduced

for allegedly showing elements of the dependent claims and as such, do nothing to cure the deficiencies of Sastri in view of Wong and Klementich.

Based on the foregoing, the Applicants respectfully submit that claims 1, 8 and 19 are patentable over Sastri in view of Wong and Klementich and notice to this effect is earnestly solicited. Claims 2-3, 5-8 and 9-18 respectively depend from one of claims 1 and 8 and accordingly are allowable for at least this reason as well as for the separately patentable elements contained in each of the claims.

For example, it is respectfully submitted that the cutting member of claims 5 and 16 are not anticipated or made obvious by the teachings of Sastri in view of Wong in view of Sanderson. As previously argued, Sastri in view of Wong in view of Sanderson does not teach, disclose or suggest, a cutting member that amongst other patentable elements, comprises (illustrative emphasis added) "wherein between the implanted layer of Cr and a pair of layers, which is closest to the substrate, the coating comprises a basic layer of CrN" as recited in claims 5 and 16.

It is undisputed that Sastri in view of Wong and Klementich does not teach, disclose or suggest the recitations of claims 5, as Sanderson is cited for showing this claim recitation. (See, Office Action, pages 5-6, numbered paragraph 7.) However, it is respectfully submitted that reliance on Sanderson, for that which is admitted missing from Sastri in view of Wong and Klementich, is misplaced.

Sanderson is clear that (emphasis added) "[t]wo coatings other than a polymer or copolymer may be used [on a blade] and the outer of these two coatings is preferably a nitride of the alloy of chromium. The other coatings which are preferably other than a

nitride of an alloy of chromium are preferably metallic, being either of a substantially pure metal (e.g. chromium) or an alloy thereof, for example an iron/chromium alloy as hereinbefore described. When an alloy coating is used, it is preferably the same alloy as that from which the nitride is derived. For example, the alloy may be an iron/chromium alloy of the type hereinbefore described and the nitride coating is then preferably derived from the same alloy. Similarly alloy and nitrided alloy coatings may be derived from chromium/platinum alloys." (See, Sanderson, Col. 7, lines 21-35.)

Accordingly, Sanderson, in contrast with what is recited in claim 5, shows a chromium metal layer overlaid by a nitride of the alloy of chromium. In other words, Sanderson does not teach, disclose or suggest that the coating closest to the substrate, comprises a basic layer of CrN as substantially recited in claims 5 and 16.

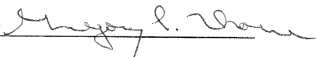
Accordingly, separate consideration of each of the dependent claims is respectfully requested.

In addition, Applicants deny any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented remarks. However, the Applicants reserve the right to submit further arguments in support of the above stated position, should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.



Applicants have made a diligent and sincere effort to place this application in condition for immediate allowance and notice to this effect is earnestly solicited.

Respectfully submitted,

By 

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April 5, 2010

**Enclosure:** WO 9300204 provided for the Examiner's convenience

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